

We Claim:

1. In a communications network an improvement comprising:  
a plurality of mobile communications devices able to transmit and receive application-related data;  
wherein one of said mobile communications device can provide said application-related data to one or more other mobile communications devices via said communications network.
2. The improvement of claim 1 wherein said mobile communications devices are equipped with GPS receivers and wherein said application-related data is GPS-related information.
3. The improvement of claim 2 wherein said GPS-related information is position information.
4. The improvement of claim 2 wherein said GPS-related information is location aiding information.
5. The improvement of claim 4 wherein said location aiding information can be used by said mobile communications devices to compute a reference location.
6. The improvement of claim 1 wherein a mobile communications device can request information from other mobile communications devices.
7. The improvement of claim 1 wherein two or more of said mobile communications devices can form groups.
8. The improvement of claim 7 wherein said groups can be hierarchical.
9. The improvement of claim 7 wherein said formation of said groups can be ad hoc.

10. The improvement of claim 9 wherein said formation of groups may be initiated by an application running on said mobile communications device.
11. The improvement of claim 8 wherein said groups may be formed to control the sharing of information between said mobile communications devices.
12. The improvement of claim 8 wherein a mobile communications device may decide to share or not share data with one or more other mobile communications devices based on membership in a group or a hierarchical level with a group.
13. The improvement of claim 11 wherein the perceived quality of said data is dependent upon the group or hierarchical level within a group to which the providing mobile communications device belongs.
14. The improvement of claim 10 wherein said group membership for a particular mobile communications device is controlled by a profile set up by a user of said mobile communications device.
15. The improvement of claim 14 wherein said profile contains information regarding which requests for application-related data can be fulfilled by said mobile communications device.
16. The improvement of claim 14 wherein said profile contains information regarding which groups may be joined by a mobile communications device.
17. The improvement of claim 16 wherein said information regarding which groups may be joined by a mobile communications device is based on what types of requests for application-related data will be made by said mobile communications device.
18. The improvement of claim 12 wherein said sharing of said data may be automatic.

19. The improvement of claim 18 wherein said sharing of data occurs without action by a user of said mobile communications device.
20. The improvement of claim 14 wherein said application-related data can be shared between mobile communications devices when said mobile communications devices are being used for voice communication.
21. The improvement of claim 20 wherein said shared data can include said profile information.
22. The improvement of claim 14 wherein one mobile communications device in a group is responsible for determining whether or not to admit other mobile communications devices to said group.
23. The improvement of claim 7 wherein said formation of groups may be facilitated by a server located with said communicators network.
24. The improvement of claim 23 wherein said list of mobile communications devices in any group is maintained by said server.
25. The improvement of claim 24 wherein said server may maintain a list of group members currently able to fulfill requests for specific application-related data.
26. The improvement of claim 7 wherein said mobile communications devices can form sub-groups within said groups.
27. The improvement of claim 26 wherein said sub-groups can be assigned priorities for the request and provision of specific application-related data.
28. The improvement of claim 7 wherein said application-related data may be collected from a source external to said communications network.

29. The improvement of claim 28 wherein a single mobile communications device can be assigned to retrieve said data from said external source and to share said data with other members of said group.
30. The improvement of claim 29 wherein said collection of data from said external source is performed periodically.
31. The improvement of claim 30 wherein all mobile communications devices in said group rotate to gather said data from said external source.
32. A method of exchanging application-related data between applications running on mobile communications devices connected to a communications network comprising the steps of:  
transmitting said data from a source mobile communications device to a first node within said communications network;  
determining which nodes in said communications network one or more destination mobile communications devices are connected to;  
transmitting said data from said first node, if necessary, to one or more other nodes having said destination mobile communications devices connected thereto; and  
transmitting said data from said one or more other nodes to said one or more destination mobile communications devices
33. The method of claim 32 wherein said mobile communications devices are equipped with GPS receivers and wherein said data includes GPS-related information.
34. The method of claim 32 further comprising the step of having two or more of said mobile communications devices forming groups.
35. The method of claim 34 further comprising the step of determining whether to send said data to or to receive said data from another mobile communications device based on group membership.

36. The method of claim 35 further comprising the step of establishing criteria for member ship of mobile communications devices within said group.

37. The method of claim 34 further comprising the steps of:

assigning one mobile communications device within said group to retrieve said data from an external source;

having said assigned mobile communications device share said data with other members of said group; and

periodically repeating the above steps of this claim.

38. The method of claim 36 further comprising the step of assigning one mobile communications device within said group to be responsible for determining if proposed new members meet said established membership criteria.

39. A system for exchanging application-related data comprising:

a communications network; and

a plurality of mobile communications devices connected to said network;

wherein said mobile communications devices can send said application-related data to other mobile communications devices via said communications network.

40. The system of claim 39 wherein said mobile communications devices are equipped with GPS receivers and wherein said application-related data is GPS-related information.

41. The system of claim 40 wherein said GPS-related information is position information.

42. The system of claim 40 wherein said GPS-related information is location aiding information.

43. The system of claim 40 wherein said location aiding information can be used by said mobile communications device to compute a reference location.

44. The system of claim 39 wherein a mobile communications device can request information from other mobile communications devices.
45. The system of claim 39 wherein two or more of said mobile communications devices can form groups.
46. The system of claim 45 wherein said groups can be hierarchical.
47. The system of claim 45 wherein said formation of said groups can be ad hoc.
48. The system of claim 47 wherein said formation of groups may be initiated by an application running on said mobile communications device.
49. The system of claim 46 wherein said groups may be formed to control the sharing of information between said mobile communications devices.
50. The system of claim 46 wherein a mobile communications device may decide to share or not share data with one or more other mobile communications devices based on membership in a group or a hierarchical level with a group.
51. The system of claim 49 wherein the perceived quality of said data is dependent upon the group or hierarchical level within a group to which the providing mobile communications device belongs.
52. The system of claim 49 wherein said group membership for a particular mobile communications device is controlled by a profile set up by a user of said mobile communications device.
53. The system of claim 52 wherein said profile contains information regarding which requests for application-related data can be fulfilled by said mobile communications device.

54. The system of claim 52 wherein said profile contains information regarding which groups may be joined by a mobile communications device.
55. The system of claim 53 wherein said information regarding which groups may be joined by a mobile communications device is based on what types of requests for application-related data will be made by said mobile communications device.
56. The system of claim 50 wherein said sharing of said data may be automatic.
57. The improvement of claim 56 wherein said sharing of data occurs without action by a user of said mobile communications device.
58. The system of claim 52 wherein said application-related data can be shared between mobile communications devices when said mobile communications devices are being used for voice communication.
59. The system of claim 58 wherein said shared data can include said profile information.
60. The system of claim 52 wherein one mobile communications device in a group is responsible for determining whether or not to admit other mobile communications devices to said group.
61. The system of claim 46 wherein said formation of groups may be facilitated by a server located with said communicators network.
62. The system of claim 61 wherein said list of mobile communications devices in any group is maintained by said server.
63. The system of claim 62 wherein said server may maintain a list of group members currently able to fulfill requests for specific application-related data.

64. The system of claim 46 wherein said mobile communications devices can form sub-groups within said groups.
65. The system of claim 64 wherein said sub-groups can be assigned priorities for the request and provision of specific application-related data.
66. The system of claim 46 wherein said application-related data may be collected from a source external to said communications network.
67. The system of claim 66 wherein a single mobile communications device can be assigned to retrieve said data from said external source and to share said data with other members of said group.
68. The system of claim 67 wherein said collection of data from said external source is performed periodically.
69. The system of claim 68 wherein all mobile communications devices in said group rotate to gather said data from said external source.